



AVCOMM®

6028GX8-POE Datasheet

Aiming to create better and safer working environments and life experiences through the products we deliver.



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Industrial IoT Data Core Security Ethernet Switch

6028GX8-POE

Industrial 28G L2+ Rackmount PoE Ethernet Switch

6028GX8-POE is an industrial rackmount 28G Ethernet Switch. Equipped with 24xGigabit copper ports,4xGigabit combo ports and 4x100M/1G/2.5G SFP slots. Up to 8xGigabit fiber ports with long-distance fiber connections to more field switches. 6028GX8-POE new design with the addition of MQTT protocol for supporting IoT and cloud applications. Rugged design, network security features and high EMC protection make the new 6028GX8-POE an ideal solution for industrial control room, roadside traffic control, industrial IoT and industrial surveillance applications.



High Throughput Ethernet Switching

- 28 full Gigabit interfaces, including 24x port GbE RJ45, 4x port GbE RJ45/SFP Combo,4x100M/1G/2.5G SFP fiber ports
- Up to 24x Gigabit copper RJ45 ports
- Up to 8x100M/1G/2.5GbE fiber ports add more fiber links to field switches
- DDM function for high quality fiber connectivity monitoring
- Powerful 1.2GHz ARM Cortex-A9 processor
- Energy-Efficient Ethernet for power saving
- 8 flexible Class of Service(CoS) queues, 512 L2 Multicast Groups for video applications
- Non-blocking switch fabric
- **16K** MAC address table, **9K** bytes jumbo frame

Industrial IoT LAN & Cloud Management

- Various configuration paths, including CGI WebGUI, CLI, SNMP and RMON
- Support AVCOMM Software Utilities:
 - ANMS Network Management System
 - AIAS for Configuration Management
 - ANMS*, ATMS OTA* for device management over Cloud*
- Support MQTT* protocol, ready to use AWS/Azure and Private Cloud Agent for cloud management
- LLDP for topology control, auto-topology drawing
- USB for easy field configuration and firmware update

Enhanced RSTP(eRSTP)

- Enhance the RSTP fault recovery time performance
- Enhance RSTP performance for large ring network topologies with up to 80 switches

IEC62443-4-2 Level 3 / 4 Cyber Security

- L2-L7 IPv4/IPv6* Access Control List (ACL)
- DHCP Snooping, IPSP, DAI
- 802.1Q VLAN, Private VLAN, Advanced Port Security
- Multi-Level user passwords
- HTTPS/SSH/SFTP, 256-bit encryption
- 802.1X MAB for non-802.1X compliant end devices
- RADIUS/TACACS+ centralized password authentication

ITU-T G.8032 v2 ERPS Ring Redundancy

- ITU-T G.8032 v1/v2 ERPS Standard Ring Redundancy protocol
- Supports HW-based CFM transmission for overcoming GbE copper physical limitation and providing minimum 20ms recovery time, seamless restoration time
- Inter-Operability with 3rd party industrial switch and still remain fast recovery time
- Replace Ring + Chain + Dual Homing

Rugged Design for Industrial Control Room and Wayside Network Switching

- EN50121-4 compliance for railway trackside, roadside, industrial control room applications
- Excellent heat dissipation design for operating in -40~75°C environments
- Supports AC, high voltage DC & low voltage DC



Ordering Information

Model Name	Description
6028GX8-POE-AC2	28-Port Industrial Fully Managed POE Switch, 20 RJ45 10/100/1000BaseT(X), 24 x 802.3af/at PoE, Auto Negotiation, 4 x 100/1000M 802.3af/at PoE RJ45/SFP Combo (4 Copper/4 fiber or 2 copper+2 fiber), 4 SFP Slots 1000BaseSFP+, Support POE/POE+, Support ITU-TG.8032, Rack Mounting, Dual Power Input 90-264VAC, -40°C-75°C
6028GX8-POE-AC2-2SX	6028GX8-POE-AC2, w/ 2 AVC-SFP-SX
6028GX8-POE-AC2-2LX-10	6028GX8-POE-AC2, w/ 2 AVC-SFP-LX-10
6028GX8-POE-AC2-2LX-40	6028GX8-POE-AC2, w/ 2 AVC-SFP-LX-40
6028GX8-POE-AC2-4SX	6028GX8-POE-AC2, w/ 4 AVC-SFP-SX
6028GX8-POE-AC2-4LX-10	6028GX8-POE-AC2, w/ 4 AVC-SFP-LX-10
6028GX8-POE-AC2-4LX-40	6028GX8-POE-AC2, w/ 4 AVC-SFP-LX-40
6028GX8-POE-AC2-6SX	6028GX8-POE-AC2, w/ 6 AVC-SFP-SX
6028GX8-POE-AC2-6LX-10	6028GX8-POE-AC2, w/ 6 AVC-SFP-LX-10
6028GX8-POE-AC2-6LX-40	6028GX8-POE-AC2, w/ 6 AVC-SFP-LX-40
6028GX8-POE-AC2-8SX	6028GX8-POE-AC2, w/ 8 AVC-SFP-SX
6028GX8-POE-AC2-8LX-10	6028GX8-POE-AC2, w/ 8 AVC-SFP-LX-10
6028GX8-POE-AC2-8LX-40	6028GX8-POE-AC2, w/ 8 AVC-SFP-LX-40
6028GX8-POE-AC-DC2	28-Port Industrial Fully Managed POE Switch, 20 RJ45 10/100/1000BaseT(X), 24 x 802.3af/at PoE, Auto Negotiation, 4 x 100/1000M 802.3af/at PoE RJ45/SFP Combo (4 Copper/4 fiber or 2 copper+2 fiber), 4 SFP Slots 1000BaseSFP+, Support POE/POE+, Support ITU-TG.8032, Rack Mounting, Single Power Input 90-264VAC+Dual Power Input 90-264VDC, -40°C-75°C
6028GX8-POE-AC-DC2-2SX	6028GX8-POE-AC-DC2, w/ 2 AVC-SFP-SX
6028GX8-POE-AC-DC2-2LX-10	6028GX8-POE-AC-DC2, w/ 2 AVC-SFP-LX-10
6028GX8-POE-AC-DC2-2LX-40	6028GX8-POE-AC-DC2, w/ 2 AVC-SFP-LX-40
6028GX8-POE-AC-DC2-4SX	6028GX8-POE-AC-DC2, w/ 4 AVC-SFP-SX
6028GX8-POE-AC-DC2-4LX-10	6028GX8-POE-AC-DC2, w/ 4 AVC-SFP-LX-10
6028GX8-POE-AC-DC2-4LX-40	6028GX8-POE-AC-DC2, w/ 4 AVC-SFP-LX-40
6028GX8-POE-AC-DC2-6SX	6028GX8-POE-AC-DC2, w/ 6 AVC-SFP-SX
6028GX8-POE-AC-DC2-6LX-10	6028GX8-POE-AC-DC2, w/ 6 AVC-SFP-LX-10
6028GX8-POE-AC-DC2-6LX-40	6028GX8-POE-AC-DC2, w/ 6 AVC-SFP-LX-40
6028GX8-POE-AC-DC2-8SX	6028GX8-POE-AC-DC2, w/ 8 AVC-SFP-SX
6028GX8-POE-AC-DC2-8LX-10	6028GX8-POE-AC-DC2, w/ 8 AVC-SFP-LX-10
6028GX8-POE-AC-DC2-8LX-40	6028GX8-POE-AC-DC2, w/ 8 AVC-SFP-LX-40

Technology	
Standard	IEEE 802.3 10Base-T Ethernet
	IEEE 802.3u 100Base-TX Fast Ethernet
	IEEE 802.3u 100Base-FX Fast Ethernet Fiber
	IEEE 802.3ab 1000Base-T Gigabit Ethernet copper
	IEEE 802.3z Gigabit Ethernet Fiber
	IEEE 802.3x Flow Control and back-pressure
	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
	IEEE 802.1p Class of Service (CoS)
	IEEE 802.1Q VLAN and GVRP
	RFC 2460 Internet Protocol, Version 6 (IPv6)
	ITU-T G.8032 Ethernet ring protection switching(ERPS)
	IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
	IEEE 802.1S Multiple Spanning Tree Protocol (MSTP)
	IEEE 802.3ad Link Aggregation Control Protocol (LACP)
	IEEE 802.1x Port based Network Access Protocol
IEEE 1588 Precision Time Protocol v1/v2	
Performance	
Switch Technology	Store and Forward Technology with Non-Blocking Switch Fabric
Number of MAC Address	16K
Packet Buffer Memory	1.5Mbytes
Transfer performance	10Base-T: 14,880pps, 100Base-TX/FX: 148,800pps, 1000Base-TX/FX: 1,488,100pps
VLAN	256 VLANs
VLAN ID	1~4094
Traffic Prioritize	8 Priority Queues per Port
Watchdog	Hardware-based 10 seconds timer
Interface	
Ethernet Port	24 x 10/100/1000M RJ45, Auto Negotiation 4 x 100/1000M RJ45/SFP Combo, (4 copper/4 fiber or 2 copper+2 fiber) 4 x 100/1000M SFP, DDM Energy-Efficient Ethernet for power saving
System LED	2 x Power (P1/P2): Normal: Green On 1 x System Status: Ready: Green On, Firmware Updating: Green Blinking 1 x DI: Green On 1 x Alarm: Red On 1 x Ring Status: Node Normal: Green On, Owner Normal: Green Blinking, Owner/Node Abnormal: Amber On, Ring Port Fail: Amber Blinking
Giga Ethernet Port LED	Link (Green On), Activity (Green Blinking), Speed 1000M(Amber On), Speed 10M/100M (Amber Off)
Giga Ethernet PoE LED	802.3af Activity (Green On), 802.3at Activity (Blue On)
Giga SFP LED	Port: Link (Green On), Activity (Green Blinking)
Console	1 x RJ45 based RS232 for System Configuration. Baud Rate: 115200.n.8.1
USB	1 x USB for Configuration/Firmware Update
Digital Output (Alarm)	1x Digital Output: Dry Relay Output with 1A /24V DC

Power Requirement		
Operating Voltage	AC110/220V (90-264VAC)	
PoE		
Power forwarding mode	Alternative A	
PoE Power Budget	PoE: Max.240W@75°C Per Port: Max. 30W	
PoE Mode	IEEE 802.3af/at	
Management	System/Port Power Budget Control, PoE Scheduling, PD Alive Check, PoE Status	
Software		
Management Interface	CGI WebGUI, Command Line Interface (CLI), Telnet, SNMP	
Time Management	NTP, IEEE 1588 Precision Time Protocol v1/v2	
Network Management	IPv4/IPv6, SNMP v1/v2c/v3/Trap, MIBs, RMON, LLDP, DHCP server/client/Option 82, TFTP, System Log, SMTP	
Traffic Management	Flow Control, Port Trunk/802.3ad LACP, VLAN, Private VLAN, GVRP, GMRP, QinQ, Class of Service, Traffic Prioritize, IGMP Snooping v1/v2/v3, Rate Control, Port Mirror	
Security	IEEE 802.1X/RADIUS, Port Security, Storm Control, SSH, SSL, QoS, L2-L7 Access Control List (ACL)	
Redundancy	Rapid Spanning Tree Protocol (RSTP)/Multiple Spanning Tree Protocol (MSTP) ITU-T G.8032 Ethernet Ring Protection Switching (ERPS)*	
Mechanical		
Installation	Rackmount	
Enclosure Material	Aluminum and Steel	
Dimension	6028GX8-POE-AC2/6028GX8-POE-AC-DC2: 436 x 44 x 300 mm(W x H x D)	
Ingress Protection	IP40	
Weight	≈2.5KG (full package)	
Environmental		
Operating Temperature & Humidity	-40°C~75°C , 10%~95% Non- Condensing	
Storage Temperature	-40°C~85°C	
MTBF	>202,000 hours	
Warranty	5 years	
Standard		
Safety	UL60950-1 Compliance	
Railway	EN50121-4 Compliance	
EMI	CISPR 22, FCC part 15B Class A	
EN50121-4 EMC Level	IEC61000-4-2 ESD: 8KV(Air), 6KV(Contact) IEC61000-4-3 RS: 10V/m(80M~1GHz), 20V/m(800M~1G) IEC61000-4-4 EFT: 2KV(Power), 2KV(Signal Port, GND) IEC61000-4-5 Surge: Power: 1KV(Line to Ground/Line to Line), Signal Port: 1KV(Line to Ground/Line to Line) IEC61000-4-6 CS: 10Vrms(Power, Signal Port) IEC61000-4-8 Magnetic Field: 30A continues /300A for 1~3s	
100Base FX		
Multi Mode	AVC-SFP-FX-SX (550m)	Wavelength: 850 nm
	AVC-SFP-FX-S (2km)	Wavelength: 1310 nm
Single Mode	AVC-SFP-FX-10 (10km)	Wavelength: 1310 nm
1000Base FX		
Multi Mode	AVC-SFP-SX (550m)	Wavelength: 850 nm
	AVC-SFP-LX-S (2km)	Wavelength: 1310 nm
Single Mode	AVC-SFP-LX-10 (10km)	Wavelength: 1310 nm



Function interface

POE Usage and Status

20x 100/1000M RJ-45 with LED for Link Status

4x 100/1000M Copper / 100/1000M SFP Fiber with LED for Link Status Configured as

- 4 Copper or
- 4 Fiber or
- 2 Copper and 2 Fiber

4x 1G/2.5G SFP Fiber with LED for Link Status

1XDI 1XDO

Console, USB

Power 2 AC Power or DC Power

Power 1 AC Power or DC Power



Installation dimensions

